Please amend the claims as follows:

Claim 1 (Currently amended) A sub-sea controller (31) located under the sea level for managing a plurality of tools in a sub-sea well installation, the sub-sea controller (31) comprising:

> downloading means to download an application module (35ₙ) to the sub-sea controller (31); and
> a virtual machine (36) to execute the downloaded application module (35ₙ).

Claim 2 (Currently amended) The sub-sea controller (412) according to claim 1, further comprising:

> a native application (47) implemented within the sub-sea controller (412); and
> a native interface (48) implemented within the sub-sea controller (412), the native interface (48) enabling the application module (45ₙ) to access the native application (47).

Claim 3 (Currently amended) The sub-sea controller (412) according to claim 2, wherein the native interface (48) enables the native application (47) to access the application module (45ₙ).

Claim 4 (Currently amended) The sub-sea controller (412) according to ~~any one of claims 2 or 3~~ claim 2, further comprising:

> a native memory wherein the native application (47) is executed; and
> a defined memory wherein the application module (45ₙ) is executed, the defined memory being distinct from the native memory.

Claim 5 (Currently amended) The sub-sea controller (412) according to ~~any one of claims 2 to 4~~ claim 2, further comprising:

> a protection register, the protection register authorizing an access to the native application only if a key code is written hereinto;

accessing means to access the protection register from the application module.

Claim 6 (Currently amended) The sub-sea controller ~~(45ₐ) according to any one of claims 1 to 5~~ of claim 1 wherein the application module ~~(45ₐ)~~ contains a driver for a tool.

Claim 7 (Currently amended) A sub-sea well installation comprising a sub-sea controller ~~(31)~~ according to ~~any one of claims 1 to 6~~ claim 1.

Claim 8 (Currently amended) A method for updating a software of a sub-sea controller ~~(31)~~ located under the sea level, the sub-sea controller ~~(31)~~ managing a plurality of tools in a sub-sea well, the method comprising:

downloading an application module ~~(35ₐ)~~ into the sub-sea controller ~~(31)~~; and

executing the application module ~~(35ₐ)~~ using a virtual machine ~~(36)~~ implemented within the sub-sea controller ~~(31)~~.

Claim 9 (Currently amended) The method according to claim 8, further comprising:

executing a native application ~~(47)~~ of the sub-sea controller ~~(42)~~ within the sub-sea controller ~~(412)~~;

executing a native interface within the sub-sea controller ~~(412)~~;

accessing the native interface from the native application ~~(47)~~ to exchange data with the application module ~~(45ₐ)~~.

Claim 10 (Currently amended) The method according to claim 8, further comprising:

executing a native application ~~(47)~~ of the sub-sea controller ~~(42)~~ within the sub-sea controller ~~(412)~~;

executing a native interface within the sub-sea controller ~~(412)~~;

accessing the native interface from the application module ~~(45ₐ)~~ to exchange data with the native application ~~(47)~~.

Claim 11 (Currently amended) The method according ~~to any one of claims 9 or 10~~ to claim 9, wherein the downloading and the executing of the application module ~~(45ₐ)~~ are

performed without interrupting an executing of the native application of the sub-sea controller ~~(412)~~.

Claim 12 (Currently amended) The method ~~according to any one of claims 9 to 11~~ of claim 9, further comprising:

    executing the application module ~~(45ₐ)~~ in a defined memory;

    executing the native application ~~(45ₐ)~~ in a native memory;

    wherein the defined memory is distinct from the native memory.

Claim 13 (Currently amended) The method ~~according to anyone of claims 8 to 13~~ of claim 8 wherein the application module ~~(45ₐ)~~ contains a driver for a tool.

Claims

[c1] A sub-sea controller (31) located under the sea level for managing a plurality of tools in a sub-sea well installation, the sub-sea controller (31) comprising:

downloading means to download an application module (35_n) to the sub-sea controller (31); and

a virtual machine (36) to execute the downloaded application module (35_n).

[c2] The sub-sea controller (412) according to claim 1, further comprising:

a native application (47) implemented within the sub-sea controller (412); and

a native interface (48) implemented within the sub-sea controller (412), the native interface (48) enabling the application module (45_n) to access the native application (47).

[c3] The sub-sea controller (412) according to claim 2, wherein

the native interface (48) enables the native application (47) to access the application module (45_n).

[c4] The sub-sea controller (412) according to any one of claims 2 or 3, further comprising:

a native memory wherein the native application (47) is executed; and

a defined memory wherein the application module (45_n) is executed, the defined memory being distinct from the native memory.

[c5] The sub-sea controller (412) according to any one of claims 2 to 4 further comprising:

a protection register, the protection register authorizing an access to the native application only if a key code is written hereinto;

accessing means to access the protection register from the application module.

14

[c6]   The sub-sea controller (45ₙ) according to any one of claims 1 to 5 wherein the application module (45ₙ) contains a driver for a tool.

[c7]   A sub-sea well installation a sub-sea controller (31) according to any one of claims 1 to 6.

[c8]   A method for updating a software of a sub-sea controller (31) located under the sea level, the sub-sea controller (31) managing a plurality of tools in a sub-sea well, the method comprising:

downloading an application module (35ₙ) into the sub-sea controller (31); and

executing the application module (35ₙ) using a virtual machine (36) implemented within the sub-sea controller (31).

[c9]   The method according to claim 8, further comprising:

executing a native application (47) of the sub-sea controller (42) within the sub-sea controller (412);

executing a native interface within the sub-sea controller (412);

accessing the native interface from the native application (47) to exchange data with the application module (45ₙ).

[c10]   The method according to claim 8, further comprising:

executing a native application (47) of the sub-sea controller (42) within the sub-sea controller (412);

executing a native interface within the sub-sea controller (412);

accessing the native interface from the application module (45ₙ) to exchange data with the native application (47).

[c11]   The method according to any one of claims 9 or 10, wherein the downloading and the executing of the application module (45ₙ) are performed without interrupting an executing of the native application of the sub-sea controller (412).

[c12] The method according to any one of claims 9 to 11, further comprising:

executing the application module (45_n) in a defined memory;

executing the native application (45_n) in a native memory;

wherein the defined memory is distinct from the native memory.

[c13] The method according to anyone of claims 8 to 12 wherein the application module (45_n) contains a driver for a tool.